

**NCHRP 20-68A – “US Domestic Scan Program”**  
**Scan 15-03 Successful Preservation Practices for Steel Bridge Coatings**

Approximately 30% of the bridges in the U.S. national bridge inventory have steel superstructures. When selecting this type of superstructure for a bridge, the operating agency incurs an obligation to maintain the coating on the steel to protect it from corrosion to obtain its full service life. However, recoating existing steel bridges is a large and costly task for transportation agencies. Many agencies are faced with significant challenges in balancing available resources with major rehabilitation, reconstruction and complete replacement needs due largely to corrosion caused by failing coating systems. Agencies are anxious to identify improved coating and recoating methods that will extend the service life and save significant costs by reducing the frequency of recoating, or the need to recoat at all, thereby delaying costly major rehabilitation and replacement activities caused by corrosion.

This scan will attempt to identify effective strategies and practices used by transportation agencies in the areas of:

- Coating option decision making
- Surface preparation
- Specifications for coating systems including :
  - Removal and replacement
  - Overcoating
  - Spot/zone coating
- Use of Performance-based contracts
- Evaluation practices for in situ coatings prior to recoating,
- Evaluation of performance of overcoat and replacement coatings
- Inspector qualifications
- Contractor qualifications
- Determination of Agency Funding Levels
- Agency commitment to supporting future preservation of coatings

The scan team will visit with agencies that have assets in aggressive corrosive environments that have successful programs to identify the aspects of those programs such as innovative coating systems and recoating practices that lead to success.

The team will research significant challenges and successful corrosion mitigation recoating strategies. Of special interest are successful strategies, technologies and approaches in dealing with concerns associated with environmentally hazardous materials.

Information documented by the scan team would provide effective strategies and other specific information for use by bridge owners in their preservation of coating systems for steel structures that will result in substantial cost savings and significant extension of service life. The audiences for this information are state and local bridge inspectors, bridge designers, bridge maintenance personnel, materials engineers and bridge preservation and management staff within state, local or other transportation agencies.

**Original Scan Proposal Title(s):** Bridge Recoating Best Practices

*Last Reviewed/Revised July22, 2015*

## Execution Schedule

| <b>Milestone</b>                          | <b>Anticipated Date</b> |
|---|-------------------------|
| Chairs and Team Members Identified        | September 2015          |
| Desk Scan Completed                       | January 2016            |
| Prescan Meeting Held                      | February 2016           |
| Scan Conducted                            | August 2016             |
| Draft PowerPoint submitted by SME         | September 2016          |
| Draft Report Delivered to NCHRP and Panel | December 2016           |
| Final Report Delivered to NCHRP           | February 2017           |

**Estimated Scan Cost:** \$170,000

Anticipated Duration: 2 week (type 2 scan)

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